

LS ANSWER 9 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:696922 CAPLUS  
 DOCUMENT NUMBER: 143:133627  
 TITLE: penta-O-galloyl-D-glucose (PGG) enantiomeric separation and purification by crystallization in water  
 INVENTOR(S): Ren, Yulin  
 PATENT ASSIGNEE(S): Ohio University, USA  
 SOURCE: PCT Int. Appl., 13 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070943	A1	20050804	WO 2005-US2262	20050124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2554190	A1	20050804	CA 2005-2554190	20050124
EP 1713817	A1	20061025	EP 2005-711954	20050124
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1930178	A	20070314	CN 2005-80005577	20050124
JP 2007518821	T	20070712	JP 2006-551386	20050124
US 20060249299	A1	20081009	US 2006-597395	20060724
IN 2006CN03055	A	20070608	IN 2006-CN3055	20060822
PRIORITY APPLN. INFO.:			US 2004-538698P	P 20040123
			WO 2005-US2262	W 20050124

#### ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A simple, inexpensive, and efficient method for separation and purification of the

$\alpha$ - and  $\beta$ - FORMS of penta-O-galloyl-D-glucose (PGG) without the need for HPLC. The methods provided herein are useful for separating  $\alpha$ -PGG or  $\beta$ -PGG from a mixture that contains  $\alpha$ -PGG and  $\beta$ -PGG and other chems. The method for separation of  $\alpha$ -PGG from a mixture of  $\alpha$ -PGG and  $\beta$ -PGG comprises the steps of: adding water to a sample containing 50% or more  $\alpha$ -PGG and 50% or less  $\beta$ -PGG; mixing the PGG and water to dissolve the PGG; filtering out any undissolved particles; and allowing the filtered solution to stand undisturbed until crystals form.

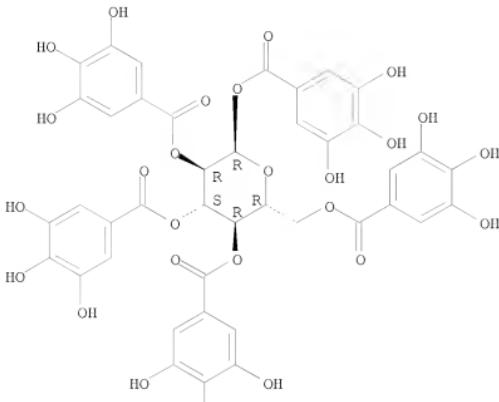
IT 70470-10-9P

RL: PUR (Purification or recovery); PREP (Preparation)  
 (penta-O-galloyl-D-glucose (PGG) enantiomeric separation and purification by crystallization in water)

RN 70470-10-9 CAPLUS

CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



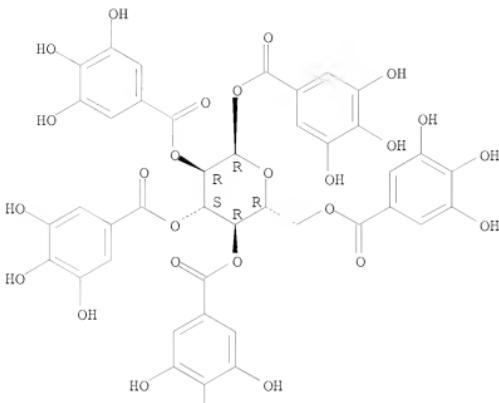
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2004:80512 CAPLUS  
 DOCUMENT NUMBER: 140:122810  
 TITLE: Methods and compositions for treating diabetes mellitus and related conditions with gallotannins  
 INVENTOR(S): Chen, Xiao; Li, Yun Sheng; Li, Jing; Liu, Fang  
 PATENT ASSIGNEE(S): Ohio University, USA  
 SOURCE: PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004009094	A1	20040129	WO 2002-US23523	20020724
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 CA 2496912 A1 20040129 CA 2002-2496912 20020724  
 AU 2002322623 A1 20040209 AU 2002-322623 20020724  
 EP 1545554 A1 20050629 EP 2002-756627 20020724  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 CN 1668311 A 20050914 CN 2002-829635 20020724  
 JP 2005538987 T 20051222 JP 2004-522925 20020724  
 IN 2005CN00054 A 20070907 IN 2005-CNS4 20050124  
 IN 221266 A1 20080801  
 US 20060058243 A1 20060316 US 2005-522662 20050909  
 PRIORITY APPLN. INFO.: WO 2002-US23523 W 20020724  
 ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OTHER SOURCE(S): MARPAT 140:122810  
 AB Methods are claimed for modulating diabetes, impaired glucose tolerance, gestational diabetes and glucose resistance in a mammal, particularly a human. In one embodiment the method comprises administering a gallotannin composition to a mammal in need of the same. The gallotannin composition comprises one or more select hydrolyzable gallotannins. In another embodiment the method comprises administering a gallotannin variant composition comprising one or more select gallotannin variant compds. to the subject. Methods of preventing or treating weight gain in a subject. The method comprises administering the gallotannin composition of the present invention, the gallotannin variant composition of the present invention, or a combination of the gallotannin composition of the present invention and the gallotannin variant composition of the present invention to the subject. The present invention also relates a gallotannin variant compound or a salt thereof, and a pharmaceutical composition comprising such compound or the salt thereof.  
 IT 70470-10-9, 1,2,3,4,6-Penta-O-galloyl- $\alpha$ -D-glucose  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (methods and compns. for treating diabetes mellitus and related conditions with gallotannins)  
 RN 70470-10-9 CAPLUS  
 CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1999:470146 CAPLUS

DOCUMENT NUMBER: 131:253871

TITLE: Binding affinities of gallotannin analogs with bovine serum albumin: ramifications for polyphenol-protein molecular recognition

AUTHOR(S): Feldman, K. S.; Sambandam, A.; Lemon, S. T.; Nicewonger, R. B.; Long, G. S.; Battaglia, D. F.; Ensel, S. M.; Laci, M. A.

CORPORATE SOURCE: Department of Chemistry, The Pennsylvania State University, University Park, PA, 16802, USA

SOURCE: Phytochemistry (1999), 51(7), 867-872  
CODEN: PYTCAS; ISSN: 0031-9422

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE (S): CASREACT 131:253871

AB A series of gallotannin analogs were prepared by chemical synthesis, and their affinity for the test-case protein bovine serum albumin was measured by equilibrium dialysis. The structure/activity data obtained suggest that the naturally occurring gallotannins, in fact, do not represent the optimal protein recognition agents amongst polyphenolated templates.

IT 70470-10-9

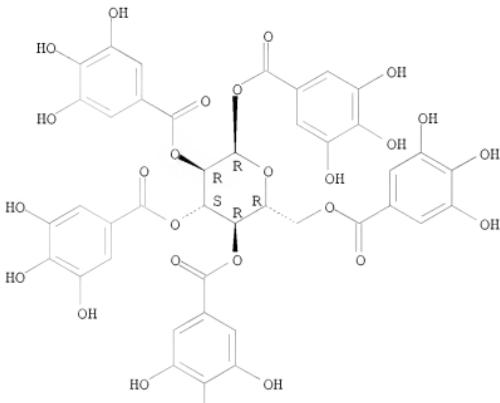
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(binding affinities of gallotannin analogs with bovine serum albumin and ramifications for polyphenol-protein mol. recognition)

RN 70470-10-9 CAPLUS

CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1998:787672 CAPLUS

DOCUMENT NUMBER: 130:165502

TITLE: Gallotannins from Quercus robur cultivated in Egypt

AUTHOR(S): Farag, Salwa F.; El-Emary, Nasr A.; Niwa, Masatake

CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmacy,

Assiut University, Assiut, 71526, Egypt

SOURCE: Bulletin of Pharmaceutical Sciences, Assiut University (1998), 21(1), 1-6

CODEN: BPAUEC; ISSN: 1110-0052

PUBLISHER: Assiut University Press

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Four gallotannins 1,2,3-tri-O-galloyl- $\beta$ -D-glucose; 1,2,3,6-tetra-O-galloyl- $\beta$ -D-glucose; 1,2,3,4,6-penta-O-galloyl- $\beta$ -D-glucose and 1,2,3,4,6-penta-O-galloyl- $\alpha$ -D-glucose, together with gallic acid and methoxy gallic acid have been isolated from the seeds of *Quercus robur* and their structures were elucidated on the basis of chemical and spectral evidence.

IT 70470-10-9, 1,2,3,4,6-Penta-O-galloyl- $\alpha$ -D-glucose

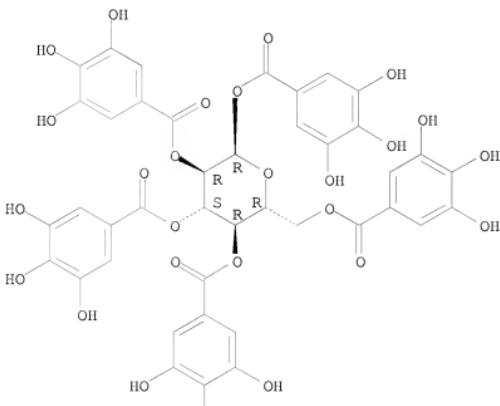
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
(from *Quercus robur*)

RN 70470-10-9 CAPLUS

CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



OS.CITING REF COUNT:

2

THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD  
(2 CITINGS)

REFERENCE COUNT:

23

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN

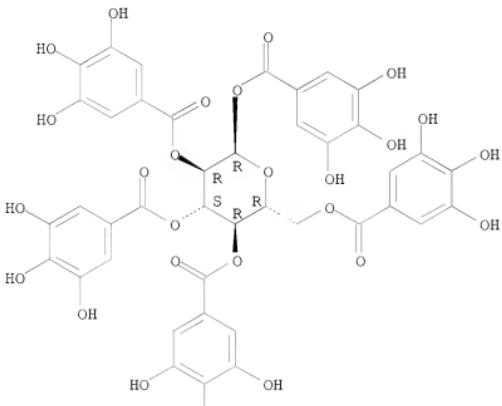
ACCESSION NUMBER: 1997:535644 CAPLUS

DOCUMENT NUMBER: 127:190922

ORIGINAL REFERENCE NO.: 127:37037a,37040a  
TITLE: Efficient total synthesis of the natural products  
2,3,4,6-tetra-O-galloyl-D-glucopyranose,  
1,2,3,4,6-penta-O-galloyl- $\beta$ -D-glucopyranose and  
the unnatural 1,2,3,4,6-penta-O-galloyl- $\alpha$ -D-  
glucopyranose  
AUTHOR(S): Khanbabaei, Karamali; Lotzterich, Kerstin  
CORPORATE SOURCE: Universitat-GH-Paderborn, Fachbereich 13 - Organische  
Chemie, Paderborn, D-33098, Germany  
SOURCE: Tetrahedron (1997), 53(31), 10725-10732  
CODEN: TETRAB; ISSN: 0040-4020  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A short synthesis of the natural products  
2,3,4,6-tetra-O-galloyl-D-glucopyranose,  
1,2,3,4,6-penta-O-galloyl- $\beta$ -D-glucopyranose and the unnatural  
1,2,3,4,6-penta-O-galloyl- $\alpha$ -D-glucopyranose was achieved based on an  
efficient esterification reaction of a benzylated gallic acid with  
 $\alpha$ , $\beta$ -glucopyranoses.  
IT 70470-10-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of the natural products tetragalloyl-D-glucopyranose,  
pentagalloyl-D-glucopyranose and pentagalloyl-D-glucopyranose)  
RN 70470-10-9 CAPLUS  
CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA  
INDEX NAME)

Absolute stereochemistry. Rotation (+).

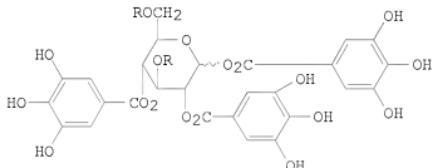
PAGE 1-A



OH

OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)  
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT.

L5 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1987:605013 CAPLUS  
DOCUMENT NUMBER: 107:205013  
ORIGINAL REFERENCE NO.: 107:32815a,32818a  
TITLE: Tannins and related compounds. LVIII. Novel gallotannins possessing an  $\alpha$ -glucose core from Nuphar japonicum DC  
AUTHOR(S): Nonaka, Genichiro; Ishimatsu, Makoto; Tanaka, Takashi; Nishioka, Itsuo; Nishizawa, Makoto; Yamagishi, Takashi  
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan  
SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(8), 3127-31  
CODEN: CPBTAL; ISSN: 0009-2363  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 107:205013  
GI



I. R=H

II, R=COC<sub>6</sub>H<sub>5</sub>(OH) 3-3, 4, 5

AB Together with 6-O- and 2,3,4,6-tetra-O-galloyl glucoses, 2 unusual gallotannins possessing an  $\alpha$ -glucopyranose core were isolated from the rhizomes of *N. japonicum*, and their structures were established as I and II on the basis of chemical and spectroscopic evidence.

IT 70470-10-9

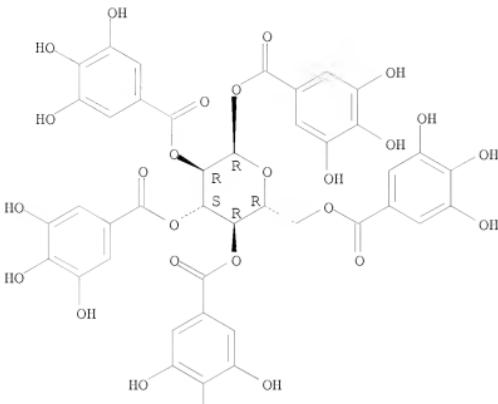
RL: PROC (Process)

(of *Nuphar japonicum* rhizomes, structure determination of)

RN 70470-10-9 CAPLUS

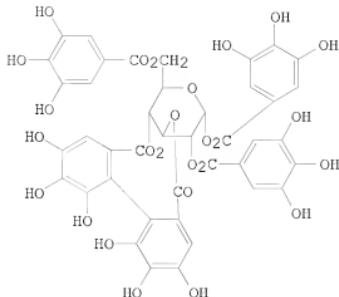
CN α-D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L5 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 1982:403544 CAPLUS  
 DOCUMENT NUMBER: 97:3544  
 ORIGINAL REFERENCE NO.: 97:715a, 718a  
 TITLE: Novel hydrolyzable tannins from *Nuphar japonicum* DC  
 AUTHOR(S): Nishizawa, Makoto; Yamagishi, Takashi; Nonaka,  
 Genichiro; Nishioka, Itsuo; Bando, Hideo  
 CORPORATE SOURCE: Hokkaido Inst. Public Health, Sapporo, 060, Japan  
 SOURCE: Chemical & Pharmaceutical Bulletin (1982), 30(3),  
 1094-7  
 DOCUMENT TYPE: CPBTAL; ISSN: 0009-2363  
 LANGUAGE: English  
 GI



I

AB Two gallotannins (I and II) and an ellagitannin (III) named nupharin A were isolated from *N. japonicum* (Nymphaeaceae). On the basis of chemical and spectral evidence, the structures of I, II and III were characterized as 1,2,6-tri-O-galloyl- $\alpha$ -D-glucose, 1,2,3,4,6-penta-O-galloyl- $\alpha$ -D-glucose, and 1,2,6-tri-O-galloyl-3,4-(S)-hexahydroxydiphenyl- $\alpha$ -D-glucose, resp.

IT 70470-10-9

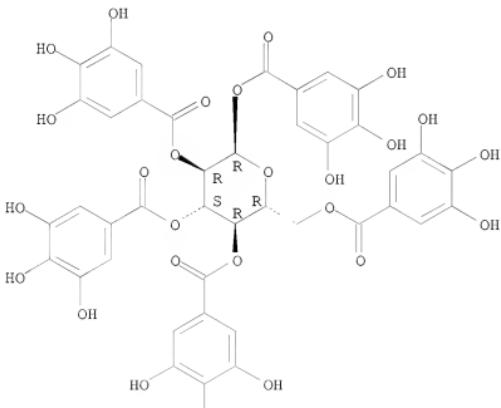
RL: BIOL (Biological study)  
(from *Nuphar japonicum*)

RN 70470-10-9 CPLUS

CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



OH

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L5 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 1979:405441 CAPLUS  
 DOCUMENT NUMBER: 91:5441  
 ORIGINAL REFERENCE NO.: 91:1019a,1022a  
 TITLE: Penta-O-galloyl- $\beta$ -glucose useful as hypoglycemic agent  
 INVENTOR(S): Carraz, Gilbert Louis Marius; Willemot, Jacques;  
 Demenge, Pierre  
 PATENT ASSIGNEE(S): Fr.  
 SOURCE: Fr. Demande, 11 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2380299	A1	19780908	FR 1977-3610	19770209
			FR 1977-3610	19770209

PRIORITY APPLN. INFO.: MARPAT 91:5441

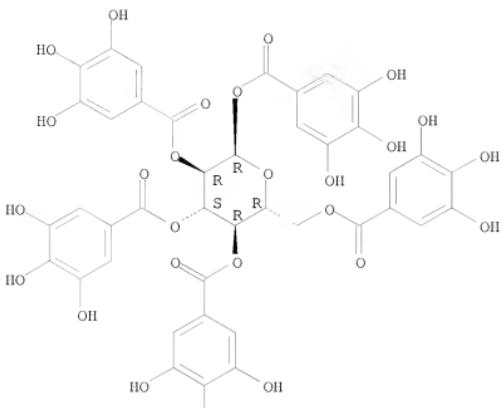
OTHER SOURCE(S): AB The title compound (1) was prepared by benzylating Me gallate, hydrolyzing benzyl derivative to the acid, chlorinating, treating the chloride with  $\alpha$ -D-glucose, and debenzylating. It was also isolated, together with ellagic acid glucosides, from Punica granatum, variety albescens, roots. The extract was hypoglycemic i.p. in mice.

IT 70470-10-9P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation and antidiabetic activity of)

RN 70470-10-9 CAPLUS

CN  $\alpha$ -D-Glucopyranose, 1,2,3,4,6-pentakis(3,4,5-trihydroxybenzoate) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)